

Amendments to the Specification:

Please replace the abstract with the following amended abstract:

Consistent with an example embodiment, in integrated circuit chip includes an electrostatic discharge (ESD) protection device. A feature of the ESD protection device includes a pair of spaced center and circumferential electrodes, the center electrode being formed by the first electrically conductive layer and the circumferential electrode being formed by the second electrically conductive layer, said electrodes being separated by a steroidal spark gap cavity toroidal spark gap cavity.

Please replace the paragraph beginning on page 2, line 32, with the following amended paragraph:

An integrated circuit chip according to the invention comprises, in sequence, a substrate layer of a substrate material, an insulating layer of an insulating material, a first electrically conductive layer of a first electrically conductive material, a dielectric layer of a dielectric material and a second electrically conductive layer of a second electrically conductive material, said IC chip comprising at least one integrated circuit and at least one integrated electrostatic discharge protection device, said electrostatic discharge protection device comprising a pair of spaced center and circumferential electrodes, the center electrode being formed by the first electrically conductive layer and the circumferential electrode being formed by the second electrically conductive layer, said electrodes being separated by a steroidal spark gap cavity toroidal spark gap cavity, wherein the toroid of the steroidal spark gap cavity toroidal spark gap cavity comprises a base layer formed by the insulating layer of the integrated circuit chip, a side wall formed by the circumferential electrode, a cover layer formed by the dielectric layer of the integrated circuit chip, and the center of the toroid being formed by the center electrode comprising a contact pad in contact with the insulating layer, said electrostatic discharge protection device also comprising means to electrically connect the center electrode to input circuit paths to be protected from electrostatic discharge and means to electrically

connect the circumferential electrode to an electrostatic discharge path comprising either a connection to a circuit ground or a circuit supply voltage.

Please add the following new paragraph directly following the paragraph beginning on page 5, line 5, and directly preceding the paragraph beginning on page 5, line 9:

Fig. 7 depicts a schematic block diagram of one embodiment of an integrated circuit chip.

Please replace the paragraph beginning on page 6, line 29, with the following amended paragraph:

Referring to FIG. 1, an electrostatic discharge protection device according to the invention comprises a pair of center and circumferential electrodes, which are spaced apart such that they define a gas filled steroidal gap toroidal gap between them.

Please replace the paragraph beginning on page 7, line 1, with the following amended paragraph:

As shown in the drawings, the electrostatic discharge protection device according to the invention thus has a quaternary-laminated structure comprising a lower insulating base layer 101, a middle electrically conductive layer 102 and a dielectric top layer 103. The middle electrically conductive layer 102 is interposed between the upper and lower layer 101 and 103, and has a steroidal discharge gap toroidal discharge gap opening.

Please replace the paragraph beginning on page 7, line 9, with the following amended paragraph:

The thickness of the disk-like circumferential electrode will depend on the level of protection sought and can be optimized using known experimental techniques so as to, for example, minimize at the electrodes the effects of spark induced erosion for the rated

voltage. The steroidal spark gap opening toroidal spark gap opening is selected in such a way that its thickness and dielectric field strength in volts per centimeter of thickness of the dielectric layer will result in a sudden rupture of the dielectric layer at the desired high voltage threshold value. Thinner gaps have lower threshold voltages, and vice-versa.

Please replace the paragraph beginning on page 7, line 1, with the following amended paragraph:

As the invention is directed to the lateral insulation between a first electrically conductive layer and a second electrically conductive layer by means of a ~~steroidal air gap~~ ~~toroidal air gap~~, these Figures show just this portion of the chip. It will be understood that these elements comprise a portion of a much larger integrated circuit chip.

Please replace the paragraph beginning on page 10, line 24, with the following amended paragraph:

The contact pad 106 of the center electrode is in intimate contact with the insulation layer 101 at the interface there between, and with dielectric layer 103 at ~~interface 50 between top metallization and second insulation layer~~ ~~the interface there between~~.

Please add the following new paragraphs directly following the paragraph beginning on page 11, line 5, and directly preceding the paragraph beginning on page 11, line 9:

Fig. 7 depicts a schematic block diagram of one embodiment of an integrated circuit chip 200. The illustrated integrated circuit chip 200 includes at least one integrated circuit 202, and an integrated electrostatic discharge protection device 204.

In one embodiment, the integrated circuit chip 200 includes semiconductors and passive components such as resistors, capacitors, and/or inductors. Likewise, in some embodiments, the integrated circuit 202 includes semiconductors and passive components such as resistors, capacitors, and/or inductors. In some embodiments, as explained

above, the components of the integrated circuit chip 200 and/or the integrated circuit 202 are manufactured on a substrate of semiconductor material.

In one embodiment, the integrated electrostatic discharge protection device 204 is integrated on the integrated circuit chip 200. In some embodiments, the integrated electrostatic discharge protection device 204 is integrated on the integrated circuit 202. In some embodiments, the integrated electrostatic discharge protection device 204 is substantially similar to the toroidal spark gap cavity electrostatic discharge protection device described above.